

CS 20. (Twice Amended) A method of improving the contrast ratio of a liquid crystal display device according to claim 18, wherein the liquid crystal layer is cooled below a smectic phase temperature.

Please ADD new claim 22 as follows:

CL --22. (NEW) The method of claim 1, wherein the liquid crystal panel is cooled below a smectic phase temperature.--

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the subject application. The Office Action of November 6, 2002 has been received and contents carefully reviewed.

By this amendment, claims 1, 3-5, 10, 12-18, and 20-22 are pending, of which claims 1, 10, 12, 18, and 20 are amended and claim 22 is added.

In the Office Action, the Examiner objected to claims 10, 12, and 20 as containing various informalities; rejected claims 1, 3-6, 10, and 15-18 under 35 U.S.C. §102(b) as being anticipated by Nito et al. (U.S. Pat. No. 5,214,523); rejected claims 7-9 under 35 U.S.C. §103(a) as being unpatentable over Nito et al. in view of the related art illustrated in Figure 1; and rejected claims 2, 12-14, 20, and 21 under 35 U.S.C. §103(a) as being unpatentable over Nito et al. in view of McDonnell et al. (U.S. Pat. No. 6,151,096). The objection and rejections of these claims is traversed and reconsideration of the claims is respectfully requested in view of the amendment above and the following remarks.

The Examiner objected to claims 10, 12, and 20 because of the following informalities: in claim 10, “a monostable the alignment” should be “a monostable alignment”; in claim 12, “according to claim 11” should be “according to claim 10”; and in claim 20, “according to claim 19” should be “according to claim 18”. Applicant respectfully submits the objections to the claims is moot in view of the aforementioned claim amendments.

The rejection of claims 1, 3-6, 10, and 15-18 under 35 U.S.C. §102(b) as being anticipated by Nito et al. is traversed and reconsideration is respectfully requested.

Independent claim 1 is allowable over the cited art in that claim 1 recites a combination of elements including, for example, “heating the cooled liquid crystal panel substantially to room temperature.” None of the cited references including Nito et al., singly or in combination, teaches or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that independent claim 1 and claims 2-9 and 22, which depend therefrom are allowable over the cited references.

Independent claim 10 is allowable over the cited art in that claim 10 recites a combination of elements including, for example, “heating the cooled liquid crystal layer substantially to room temperature.” None of the cited references including Nito et al., singly or in combination, teaches or suggest at least this feature of the claimed invention. Accordingly, Applicant respectfully submits that independent claim 10 and claims 12-17, which depend therefrom are allowable over the cited references.

Independent claim 18 is allowable over the cited art in that claim 18 recites a combination of elements including, for example, “heating the cooled liquid crystal layer substantially to room temperature.” None of the cited references including Nito et al., singly

or in combination, teaches or suggest at least this feature of the claimed invention.

Accordingly, Applicant respectfully submits that independent claim 18 and claims 20 and 21, which depend therefrom are allowable over the cited references.

The rejection of claims 7-9 under 35 U.S.C. §103(a) as being unpatentable over Nito et al. in view of the related art illustrated in Figure 1 is traversed and reconsideration is respectfully requested.

Claims 7-9 include all of the limitations of claim 1 as discussed above, and Nito et al. fails to teach or suggest at least the features of independent claim 1 as recited above. Similarly, the related art illustrated in Figure 1 fails to cure the deficiencies of Ntuo et al. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claims 7-9, as above.

The rejection of claims 2, 12-14, 20, and 21 under 35 U.S.C. §103(a) as being unpatentable over Nito et al. in view of McDonnell et al. is traversed and reconsideration is respectfully requested.

Claim 2 includes all of the limitations of claim 1 as discussed above, and Nito et al. fails to teach or suggest at least the features of independent claim 1 as recited above. Similarly, McDonnell et al. fails to cure the deficiencies of Nito et al. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claim 2, as above.

Claims 12-14 include all of the limitations of claim 10 as discussed above, and Nito et al. fails to teach or suggest at least the features of independent claim 10 as recited above. Similarly, McDonnell et al. fails to cure the deficiencies of Ntuo et al. Accordingly,

Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claims 12-14, as above.

Claims 20 and 21 include all of the limitations of claim 18 as discussed above, and Nito et al. fails to teach or suggest at least the features of independent claim 18 as recited above. Similarly, McDonnell et al. fails to cure the deficiencies of Nito et al. Accordingly, Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness regarding claims 20 and 21, as above.

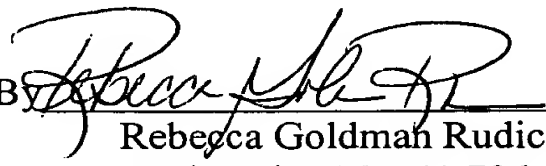
Applicants believe the application in condition for allowance and early, favorable action is respectfully solicited. Should the Examiner deem that a telephone conference would further the prosecution of this application, the Examiner is invited to call the undersigned attorney at (202) 496-7500.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136. Please credit any overpayment to deposit Account No. 50-0911.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

MARKED UP VERSION OF THE AMENDED CLAIMS

1. (Twice Amended) A method of fabricating a liquid crystal display device, comprising:

- forming a liquid crystal panel including first and second substrates;
- forming a ferroelectric liquid crystal layer between the first and second substrates of the liquid crystal panel; [and]
- cooling the liquid crystal panel [to a temperature of a smectic phase] so as to produce monostable alignment of the ferroelectric liquid crystal; and
- heating the cooled liquid crystal panel substantially to room temperature.

10. (Twice Amended) A method of fabricating a liquid crystal display device, comprising:

- forming a liquid crystal panel having a first substrate and a second substrate;
- interposing a ferroelectric liquid crystal layer comprised of liquid crystal molecules, between the first substrate and [a]the second substrate; [and]
- cooling the liquid crystal layer to form a monostable [the] alignment of the liquid crystal molecules; and
- heating the cooled liquid crystal layer substantially to room temperature.

12. (Twice Amended) A method of fabricating a liquid crystal display device according to claim [11]10, wherein the liquid crystal layer is cooled below a smectic phase temperature.

18. (Twice Amended) A method of improving the contrast ratio of a liquid crystal display device, comprising:

forming a liquid crystal panel having a first substrate, a second substrate, and an interposed ferroelectric liquid crystal layer that is comprised of liquid crystal molecules;

cooling the liquid crystal layer to form a monostable alignment of the liquid crystal molecules;

heating the cooled liquid crystal layer substantially to room temperature; and
passing light through said liquid crystal panel.

20. (Twice Amended) A method of improving the contrast ratio of a liquid crystal display device according to claim [19]18, wherein the liquid crystal layer is cooled below a smectic phase temperature.